- BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

Editorial Note—The suggestion that CALIFORNIA AND WESTERN MEDICINE devote space to brief discussions of specific problems of bedside medicine by bedside doctors has met with such a surprisingly enthusiastic endorsement from so many sources that this department will hereafter be featured in each issue of the magazine. Some of the subjects now being discussed are:

What constitutes the minimum evidence warranting a positive diagnosis of diabetes mellitus?
Should drug addiction be a reportable disease? Give reasons.
Management of patients with whooping cough.
Brief of evidence that warrants surgical intervention in pulmonary tuberculosis.
A brief of the evidence which justifies a diagnosis of infantile paralysis.
The practicability of radiologic visibility of the gall bladder, its availability, indications and values to the family doctor.
The symptoms and evidence that warrant a diganosis of pyloric stenosis in infants.
Common sense and urinary lithiasis.
Minimum groups of symptoms and findings that warrant a diagnosis of syphilis.
A brief of the best modern practice in the treatment of "primary and secondary" syphilis.
The reliable and dependable remedies in the treatment of the later manifestations of syphilis and the method of their employment.
What are the essential indications for Caesarean section?
Under what conditions, if any, is appendicostomy justifiable?
What can doctors do to increase the number of useful bedside nurses at a price consistent with essentials in training and education?

Physicians who desire to add their discussion to any of these subjects, or who will suggest other subjects, are cordially invited to do so.

The policy that will be followed consists essentially in selecting timely limited subjects; having the groundwork of the discussion carefully prepared by invited authors; and then giving as many as possible bedside doctors, particularly those in unlimited practice, a chance to express opinions and give the results of their experiences with the subject.

Discussion of this first publication might have been extended to include a larger number of physicians, but has been concluded in order to start this department at an early date.

In addition to his discussion of this subject, printed below, Doctor G. G. Hawkins of Madera says in a letter of transmittal, among other interesting things, that "this is my maiden effort at medical publicity. CALIFORNIA AND WESTERN MEDICINE is in my opinion making wonderful advancement in usefulness to the medical profession, ranking with the very best of medical journals. Its pages are read by me and all other general practitioners with interest, which grows with each issue. In your space 'Bedside Medicine for Bedside Doctors' you have hit a responsive chord in the heart of every real family doctor, I am quite sure. Keep that space clear of highly scientific thought and laboratory research, continue to make it extremely practical by calling frequently upon the experience and interpretation of the country doctor. You will thereby develop and encourage him and make him feel that CALIFORNIA AND WESTERN MEDICINE is really his magazine and that he is entitled and expected to try at least to help make it a success by contributing from his own experience."

CURRENT CONCEPTION OF RECTAL FEEDING: USES, SUBSTANCES AND METHODS

ERNEST H. FALCONER (384 Post Street, San Francisco)—In discussing the current conception of Rectal Feeding, it is important to recall certain physiological facts concerning the colon. Foremost of these is the fact that in man the colon is of little importance as an absorbing organ. A certain amount of fluid is absorbed constantly from the colon, chiefly from the upper portion. It is estimated that about 500 cc. of water passes through the ileocaecal valve in twenty-four hours. Of this amount about 400 cc. are absorbed in the colon. The isolated colon is able to absorb about 6 grams of dextrose and 80 cc. of water per hour. Egg albumin or caseinogen solutions introduced per rectum show no absorption after several hours. After longer periods of time, some disappearance of proteins and emulsified fats has been observed, but this is probably due to bacterial decomposition, and has very little food value. In some instances where large nutrient enemata are used, it is possible that a small portion may regurgitate through the ileocaecal valve and thus become absorbed. For practical purposes, very little nourishment can be given to an individual through rectal feeding. The chief use of rectal feeding is for administration of fluids such as water, salines and glucose solutions.

The importance of keeping up the fluid intake in infections and intoxications seems to be pretty generally recognized at the present time. The basis for this procedure lies in the clinical improvement that accompanies the dilution of toxins and increased facility of their removal that follows, when plenty of fluid is present in the tissues. At the present time, the so-called "Murphy drip" is the most popular method of giving fluid per rectum and the solution generally used is glucose solution. One practical difficulty with the "Murphy drip" is that certain patients are unable to retain the solution, apparently due to irritation of the mucous membranes of the lower colon and rectum, by the continuous presence of the catheter in the rectum. In such instances it is better to give a small retention enema of about 200 or 300 cc. to be repeated about twice during the day. Glucose solutions have an advantage over plain water or saline solution in that calories are introduced in an easily utilizable form. In post-operative cases, especially where acidosis is present, in protracted vomiting, uremia, certain cases of diabetic coma (as a supplement to insulin treatment), and in bleeding gastric or duodenal ulcer, from 5 to 10 per cent glucose solutions per rectum are of distinct value. The important fact to recognize in rectal alimentation is that it is at best a method of slow starvation, and does not prevent tissue breakdown. It should not be employed over long periods of time in cases where it is impossible to take nourishment by mouth. In this type of case it is usually better to employ surgical means to perform a gastrostomy or jejunostomy and feed by means of a tube directly into the stomach or jejunum.

LOVELL LANGSTROTH, M. D. (490 Post Street, San Francisco)—Doctor Falconer is right. There is excellent evidence to show that glucose and water may reach the body cells through the mucous membrane of the colon but that food,even when partly digested, will not do so. Rectal feeding is therefore a misnomer.

Even for absorbing fluids the rectum is unsatisfactory for several reasons. The first of these is that the fluid is frequently not absorbed, the second that the tube often causes much discomfort, and the third that the greatest amount that can be given this way is usually inadequate. This fluid is intended not only to dilute toxins and aid in their excretion but also to support the circulation, to aid in distributing heat evenly throughout the body, and to bring it to the surface for elimination. In order to serve these purposes it must be given in large amounts. An individual with a gastroenteritis needs much more than his usual intake of liquid because he is losing fluid in his vomitus and in his stools; a patient with a severe infection must have more than he can be induced to take by mouth because he is losing large amounts in his ef-

forts to cool off the body. Indeed practically every illness where fluids cannot be taken by mouth requires at least 3000 cc. per twenty-four hours which the most skilful nurse could not administer rectally.

The alternative is hypodermoclysis. While requiring careful asepsis it is much more satisfactory because one is certain that the fluids get to the tissues and because it really causes less discomfort. Glucose, of course, cannot be given this way but the amount introduced rectally is so small as to be of very little value. If needed this sugar can easily be given intravenously. Generally I would rather use hypodermoclysis than to give fluids by rectum.

F. F. GUNDRUM, M. D. (Capital National Bank Building, Sacramento, California)—Adequately to provide for the body's alimentary needs by rectal feeding is not practicable. Digestive ferments poured into the intestine higher up are no longer active in the caecum. Substances of large molecular size, fats, albumins, proteoses or even amino acids are unabsorbed by the colonic mucosa. To make matters worse, the introduction of these fluids furnishes an excellent culture medium and the great increase in bacterial flora soon produces a colitis which makes further rectal interference impossible.

As a temporary means of giving the body needed assistance the large bowel has a great usefulness. Glucose, whiskey, inorganic salts and water are freely taken up and their administration may, with care, be continued over a considerable period. The so-called "Murphy" method owes its popularity to the surgeons who employ it for two or three days post operative to restore needed fluid apt to be depleted through surgical procedures. It is the common practice, at the same time, to give morphine generously, diminishing the rectal reflexes and obtunding the sensorium so that the constant presence of the tube is tolerated better than under other conditions. At best the majority complain a good deal in three or four days and few are able to retain the tube longer than a week.

If the colon is carefully cleaned with salt solution irrigations and the rectal feeding introduced slowly at a temperature of about 105 degrees F., the patient's hips being somewhat elevated, it is usually possible to run in 800 cc. without discomfort and to fill the entire large bowel. Repeated at eight-hour intervals very little bowel irritability appears.

The amounts absorbed vary within wide limits. A patient much dehydrated may absorb three or four quarts of solution in the first twenty-four hours, particularly if the fluid is hypo-tonic. Potency of the ileocecal valve may also account for free absorption.

It is important that the solution used be dilute. Too concentrated a liquid will draw fluid into the bowel through osmosis. The amounts of food obtainable in this way are not great. In 1000 cc. of water, 8.5 gms. of glucose and 60 cc. of whiskey make a slightly hypotonic solution, a total of 454 calories. Three feedings then of 800 cc. each would yield 1089 calories each twenty-four hours.

THOMAS C. EDWARDS, M. D. (Salinas, California)—I believe that in some cases very definite benefit is obtained by rectal feeding, the laboratory findings to the contrary notwithstanding.

Where the stomach persistently refuses to retain anything given, then the introduction into the rectum of what we "old timers" have been accustomed to term, a nutrient enema, many times seems to be beneficial.

We may think we know all about what happens chemically, or physio-chemically, when food is given per rectum, but there are forces at work that are bio-chemical, and I suggest that sometimes the bio does things of which we know little.

When we remember that an "active principle" has been isolated from the pituitary of which a portion so minute as one part in seven million or more injected into a guinea pig will cause the virgin uterus to contract, may we be excused if we think that there may be some hormone or other unknown and unnamed substance, in a "nutrient enema" that will enter the circulation and cause a favorable reaction in the patient?

I am not claiming that we can adequately nourish a patient, per rectum, but I feel certain that I have seen patients improve after its use, tided over a crisis, as it were.

This may be simply a coincidence, but I have enough faith in its use, in practice, to continue to give it the benefit of the doubt, which does *not* exist in my mind.

GEORGE GILES HAWKINS, M. D. (Madera, California)—The problem of adequately feeding a patient per rectum has never been solved nor any standardized food proposed. To the recent graduate, the various formulae offered so freely by our text books, the numerous predigested foods so profusely advertised, give encouragement and hope but eventually lead to disappointment.

True, in the past on various occasions we have seen transient, apparently beneficial results from rectal alimentation with such familiar stimulants and food as black coffee, whiskey, peptonized milk, variously prepared egg-nogs, peptones, etc., but the colon soon rebels against such procedures and our patient slowly weakens until something more radical becomes imperative. In certain selected cases rectal alimentation is worthy of at least a trial, bearing in mind that to be at all effective it must be properly and intelligently administered.

That a "nutrient enema" has no place in the practice of medicine one should not be so bold as to assert, but its adoption should supplement, rather than precede, such measures as normal salt by hypodermoclysis or glucose intravenously. That food absorption actually takes place in the colon is not to be disputed, but to what degree is a mooted question. That opium acts as a sedative, ether as an anesthetic, whiskey as a stimulant, when given rectally, is well known. To introduce and assimilate sufficient calories of a well balanced ration is impossible.

Hoping that food introduced in sufficient quantity to thoroughly fill the colon might, perchance, through antiperistalsis and a patency of the ileocecal valve, find a greater absorptive field in the ileum is not to be depended upon. The normal function of the ileocecal valve prevents this very thing. Many good authorities, however, recommend a small amount of sodium chloride in rectal feedings because of its osmotic power and because of its anti-peristaltic action, helping to keep the nutrient well up in the higher portion of the colon and hoping, almost against hope, that some portion of the feeding will leak through the valve. Not believing in this possibility, the more rational method of feeding would be smaller quantities of eight ounces at eight-hour intervals.

With the oral, nasal and gastric route blocked, our temporary detour is often, and of a necessity, via the rectum. The psychic effect not only upon the starving patient, but upon the anxious relatives as well, gives to the family physician also a sense of satisfaction and relief in that he has attempted to do what he could, awaiting the opportune time to render greater assistance if possible.

The annual report of the California Industrial Commission emphasizes the magnitude of the state-managed insurance company. According to the report, "The Fund now does a premium business of nearly $6,000,000 per year and returns an average 30 per cent yearly dividend to its policyholders. On June 30, 1925, the Fund's reserves amounted to $4,347,434.79 and its catastrophe surplus totaled $2,156,988.78.

"The report also contains a diagram showing the comparative industrial fatalities over the ten-year period, 1914-1924. It is interesting to note that the number of fatalities per 100,000 population has decreased from 25 in 1914 to 16.4 in 1924."

The most interesting opinion expressed is, that farm labor is becoming more hazardous with the introduction of modern machinery. There were 32 fatal accidents, 40 permanent disabilities and 5115 other injuries during the year. In view of these facts the Commission believe that the compensation laws should be amended to include farm labor.

It is great fun to be an idealist and keep a rendezvous with death at some disputed barricade, or, in Mr. Pickwick's less thrilling phrase, to shout with the crowd, and if there are two crowds, shout with the largest.—Gerald W. Johnson, Century.